

Abstract

A brake valve actuator (BVA) of a vehicle is controlled by an electronic control unit (ECU) to provide automatic traction control (ATC), roll stability (RS) and yaw stability (YS) functions for the vehicle, by actuating the dual brake valve without driver intervention. The ATC function is provided by making braking pressure available at the driven wheels only of the vehicle. This may be done by selectively controlling the modulators for the driven wheels and the non-driven wheels of the vehicle. The ATC function in this manner can be provided for a straight truck or bus, or for a tractor and trailer, without the need for an ATC solenoid. In another embodiment, a yaw control function is provided, without the need for ATC solenoids or for pressure sensors in the delivery lines. In yet another embodiment, yaw control benefits are provided with an additional sensor.